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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,016

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Hironori Noto

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EXAMINER

CHU, HELEN OK

ART UNIT

PAPER NUMBER

1745

MAIL DATE

DELIVERY MODE

06/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/730,016	Applicant(s) NOTO, HIRONORI	
	Examiner Helen O. Chu	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-13, 18, 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/5/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's Arguments/Remarks has been received on March 13, 2007. Claim 1 has been amended.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant states that Paragraph 35 and 40 and in the Figures the Examiner will find support for an internal manifold comprises three fluid manifolds. The support for claim 18 was not found in the specification.

5. The rejection under 35 U.S.C 112, second paragraph on claim 6 is withdrawn because Applicant has amended claim 1.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation "another surface" is unclear to the Examiner as to which element the Applicants are claiming, therefore, for purposes of prosecution the Examiner is interpreting any surface on the stacked cell unit to be equivalent to the Applicant's claim.

8. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation "three fluid manifold" is unclear to the Examiner. The recitation can mean three manifolds that hold three separate fluids or three separate manifolds that stems from the main manifold. The Examiner cannot further prosecute claim 18.

Claim Rejections - 35 USC § 102

9. The rejections under 35 U.S.C 102 (b), on claims 1, 3-6, 8-13 as anticipated by Unkle et al. are withdrawn because Applicant has amended claim 1.

10. The rejections under 35 U.S.C 102 (b), on claims 1,6 and 7 as anticipated by Bonk et al. are withdrawn because Applicant has amended claim 1.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 3-6, 8-13 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Unkle et al. (US Patent 3,717,505).

In regard to claims 1, 3, 4, 6, 7, 9, 10, 12, 13 and 19, the Unkle, Jr. et al. reference discloses a fuel cell stack (Abstract) with frames (Applicant's separators; Figure 2, Component 15) separating successive electrode assemblies (Figure 2, Component 13). The stack cells have manifolds formed within the separators, where one side of the manifold is smooth (upper portion of 37). The Unkle, Jr. et al. reference illustrates in Figure 3a component 35 is an internal passage system in the front end plate which is connected by suitable fittings 37 (Applicant's sleeve) to both of the electrodes of the first electrode subassemblies. These fittings (Applicant's sleeve) provide a gas to the front surface of the first electrode assembly, and each electrode assembly (Column 2, Lines 57-63). Figure 3A also illustrates the internal manifold is tapered.

In regard to claims 5 and 11, the Unkle et al. reference discloses bonding and sealing the frame (Column 2, Lines 11-14).

In regards to claim 8, the Unkle, Jr. et al. reference illustrates an external surface parallel to the cell stack direction (Figure 3).

patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since the disclosed invention of Unkle, Jr. et al. reference is similar to that of the Applicant's, Applicant's process is not given patentable weight in this claim.

Response to Arguments

Applicant's arguments filed March 13, 2007 have been fully considered but they are not persuasive.

The Applicant's principal arguments are:

- a) Unkle does not suggest an internal manifold that is formed so as to pass through the entire stacked cells and the separators in a cell-stacking direction.
- b) component 35 does not pass through the separators in a cell stacking direction. Instead, component 35 is formed only in an end plate 29 and is parallel to the planes of cells 15, and therefore transverse to a cell-stacking direction of cell stack 11.
- c) Assuming that the fittings 37 may be properly construed as a manifold, the fitting still does not extend the entire stacked cells and the separators in a cell stacking direction as required by claim 1.

In response to Applicant's arguments, please consider the following.

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a) According to Figures 2 and 3A, three cells make up the entire stacked cell separated by separators 15. The internal manifold does go through the entire stacked cell and separators.

c) and b) Column 2, Lines 54-58 states "inlet 33 leads to an internal passageway system 35 in the front end plate which is connected by suitable fittings 37 to both of the electrodes." Perhaps the inlet 33 to the passageway 35 are parallel to the cell stack but the manifold 35 connected to fittings 37 does go through the cell stack and separators.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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